

Inspection of ES&H Programs at BNL Corrective Action Plan



SIXTY YEARS
OF DISCOVERY
1947-2007

ES&H Coordinators
Steven A. Coleman, ISM Project Manager
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BROOKHAVEN
NATIONAL LABORATORY



Presentation Overview

- **Introduction**
- **ES&H Corrective Action Plan Development**
 - Causal Analyses
- **Corrective Action Overview**
 - DOE HS-64 Inspection Findings
 - ISM/Safety Improvement Project Integration
- **Performance Monitoring**
 - Project Reviews/Change Control
 - Corrective action Closeout

Introduction

- The DOE Office of Environment, Safety and Health Evaluations (HS-64) inspection identified 7 BNL site specific findings and 18 opportunities for improvement (OFIs).
- Beyond the findings and OFIs, BNL developed compensatory actions for 17 conditions of unmitigated hazards extracted from the validation appendices.
 - January 11, 2008 – submitted to DOE-BHSO
 - January 16, 2008 – Approved by BHSO & DOE Office of Science
 - February 15, 2008 – Approved by DOE Office of Independent Oversight with the condition that BSA/BNL add 3 actions for line organization implementation and effectiveness



ES&H CAP Development Process

■ Causal Analyses & Actions

- Reviewed the 7 findings to determine if further causal analysis was required.
 - Previous causal analyses for 3 of the findings (C-3, C-4 & D-5) were determined to be sufficient
 - The remaining 4 findings (C-1, C-2, D-3 & D-4) were analyzed to determine causes
- In all - 31 corrective actions and 17 compensatory actions were identified.



Corrective Action Overview

- **C-1 Finding – BNL has not ensured that some ES&H and assurance requirements/controls are adequately defined and communicated to workers through SBMS**
 - This finding was aimed at the development of SBMS ES&H documents on a consensus basis and flexibility for department/division buy in (e.g., should, consider, as appropriate).
- **There are 4 corrective actions for finding C-1**
- **Summary of activities:**
 - Establish a working group to develop and implement an enhanced process for developing, rolling out and communicating changes to new SBMS documents, and based on significant institutional risks, modify/change ES&H subject areas.

Corrective Action Overview

- **C-2 Finding – BNL Management and Supervisors have not ensured that workers implement established safety controls.**
- **There are 5 corrective actions for finding C-2**
- **Summary of activities:**
 - The Laboratory Director committed to quarterly manager and supervisor forums where worker safety and health performance and managers' and supervisors' roles and responsibilities for safety (i.e. performance of work within established controls) are discussed.
 - Dissemination of quarterly communication tool for managers and supervisors ("leadership connection").
 - ***Performance Management system enhancements*** and Leadership Pipeline – with the assistance of Drotter Human Resource Consulting, the laboratory will better define performance dimensions, work values, and full performance expectations.
 - All hands meetings devoted to safety, conduct of operations and performance of work within controls will be held by Assistant/Associate Laboratory Directors

Corrective Action Overview

- **C-3 Finding – BNL small science has not ensured that activity-level experiment safety reviews and job risk assessments provide sufficient information about workplace hazards...**
- **C-4 Finding – Plant Engineering has not sufficiently implemented the requirements in the BNL-wide work planning and control subject area of SBMS...**
 - Previous causal analyses and corrective actions in the ISM/Safety Improvement Project address these findings . The corrective actions for these findings are ongoing.
- **There are 4 corrective actions open that address these findings**
- **Summary of activities:**
 - Experimental Safety Review (ESR) process enhancements, including development and implementation of a web-based electronic ESR.
 - Perform an effectiveness review on the recently implemented three tiered WP&C process (i.e. worker planned, prescribed and permit planned work), and quality of hazard evaluations.

Corrective Action Overview

- **D-3 Finding - BNL has not implemented an effective compliant self-assessment program that appropriately identifies, prioritizes, plans and conducts rigorous evaluations...**
- **There are 7 corrective actions for finding D-3**
- **Summary of activities:**
 - BNL will benchmark DOE sites and other Research & Development sites to gain insights on planning, prioritizing and conducting integrated assessments.
 - Based on the process established above, develop a baseline risk assessment plan for each ESH&Q Management System. Create a laboratory process for developing an annual assessment plan for each ESH&Q management system utilizing the baseline assessment plans.
 - Establish training requirements for conducting assessments, and to deliver training on conducting effective integrated assessments.
 - **Line organization implementation and effectiveness of assessment programs.**

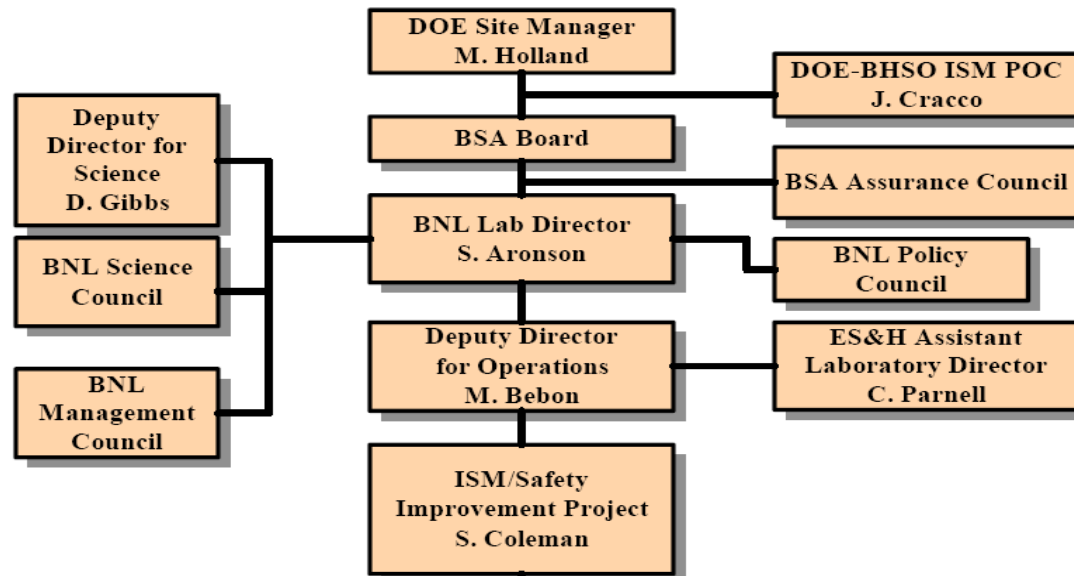
Corrective Action Overview

- **D-4 Finding – BNL has not established and implemented an effective issues management program that appropriately describes safety deficiencies, determine their causes and extent of condition...**
- **There are 6 corrective actions for finding D-4.**
- **Summary of activities**
 - Establish an Issues Management working group consisting of a cross section of department/division representatives to identify and recommend a set of ESH&Q data/information to be reported to Laboratory Management. B
 - Develop a process to track, trend, and analyze ES&H information and implement the new ES&H performance information process.
 - **Line organization issues management implementation and effectiveness**

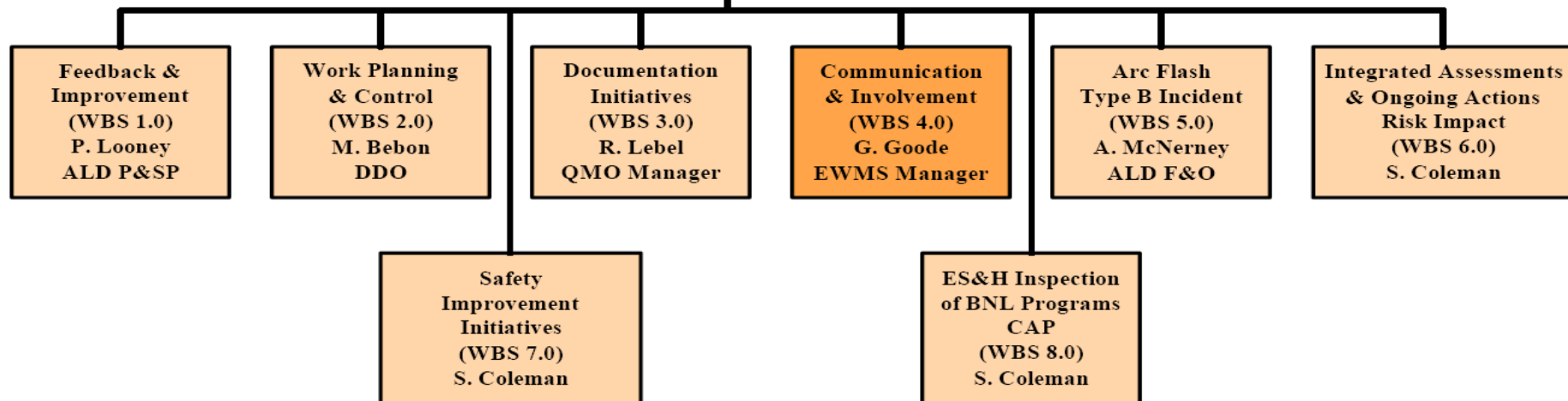
Corrective Action Overview

- **D-5 Finding – BNL has not implemented a rigorous and effective program of injury and illness investigations...**
- **There are 5 corrective actions for finding D-5**
- **Summary of activities:**
 - Revise the Investigation of Incidents, Accidents and Injuries subject area to include reporting all incidents or events to the BNL Event Categorizers (for consistency in reporting and analyzing) . Use trained investigators to perform all accident investigations
 - Conduct a review and evaluate prior accident investigation reports to determine the quality of reports and if appropriate analyses were performed and address deficiencies (i.e. causal analyses).
 - Accident Investigation training and injury and illness investigations – includes training and assigning a cadre of investigators.
 - **Line organization implementation and effectiveness of injury and illness investigations and reporting.**

ES&H CAP – ISM/Safety Improvement Project Integration



ISM Project WBS Elements



Performance Monitoring

■ Project Reviews/Change Control

- Project reviews every 6-8 weeks – Lab Director, Deputy Director, DOE-BHSD, Assistant/Associate Laboratory Directors, Department Chairs, and others
- Manager responsible for WBS sections reports on status, risk, resource needs, proposed changes, etc...



Performance Monitoring

■ Corrective Action Closeout

- Action items were entered into the DOE-HQ Corrective Action Tracking System (CATS) and BNL Institutional ATS 4015
- Objective evidence is required for closeout of action items
- Coordinate with appropriate DOE-BHSD staff to close out ATS 4015 and DOE-HQ Corrective Action Tracking System (CATS) action items.

ES&H Inspection Report & Corrective Action Plan can be found at <http://www.bnl.gov/qmo/ISM.asp>